

Appendix G1: Noncarcinogenic Risk Estimate for Adults
General Public and Native American Population

Anadromous Fish: Pacific lamprey
 Fillet with skin, and whole body samples

Chemical Group	Chemical	Sample Type	Hazard Quotient					
			General Public		Native American			
			AFC	HFC	AFC	HFC	Site	Waterbody
Aroclors	Aroclor 1254	FS	0.47	8.8	3.9	24	21	Willamette River
Aroclors	Total aroclors	FS	0.47	8.8	3.9	24	21	Willamette River
Pesticides	Chlordane (total)	FS	0.0092	0.17	0.077	0.48	21	Willamette River
Pesticides	Total DDT	FS	0.020	0.38	0.17	1.0	21	Willamette River
Pesticides	Hexachlorobenzene	FS	0.0010	0.019	0.0086	0.053	21	Willamette River
Metals	Arsenic	FS	0.011	0.21	0.094	0.58	21	Willamette River
Metals	Cadmium	FS	0.0025	0.048	0.021	0.13	21	Willamette River
Metals	Chromium	FS	0.0029	0.054	0.024	0.15	21	Willamette River
Metals	Cobalt	FS	0.000059	0.0011	0.00050	0.0031	21	Willamette River
Metals	Copper	FS	0.0035	0.066	0.029	0.18	21	Willamette River
Metals	Manganese	FS	0.00029	0.0055	0.0024	0.015	21	Willamette River
Metals	Selenium	FS	0.0092	0.17	0.078	0.48	21	Willamette River
Metals	Vanadium	FS	0.00015	0.0028	0.0012	0.0077	21	Willamette River
Metals	Zinc	FS	0.0072	0.14	0.061	0.37	21	Willamette River
Aroclors	Aroclor 1254	WB	0.39	7.4	3.3	20	21	Willamette River
Aroclors	Aroclor 1254	WB	0.70	13	5.9	36	24	Fifteen Mile Ck
Aroclors	Total aroclors	WB	0.46	8.7	3.8	24	21	Willamette River
Aroclors	Total aroclors	WB	0.70	13	5.9	36	24	Fifteen Mile Ck
Pesticides	Chlordane (total)	WB	0.0044	0.084	0.037	0.23	21	Willamette River
Pesticides	Chlordane (total)	WB	0.012	0.22	0.099	0.61	24	Fifteen Mile Ck
Pesticides	Total DDT	WB	0.015	0.29	0.13	0.79	21	Willamette River
Pesticides	Total DDT	WB	0.026	0.50	0.22	1.4	24	Fifteen Mile Ck
Pesticides	Hexachlorobenzene	WB	0.00057	0.011	0.0048	0.030	21	Willamette River
Pesticides	Hexachlorobenzene	WB	0.0014	0.026	0.012	0.071	24	Fifteen Mile Ck
Semivolatiles	Fluoranthene	WB	0.000032	0.00060	0.00027	0.0016	24	Fifteen Mile Ck
Metals	Aluminum	WB	0.00014	0.0026	0.0011	0.0070	21	Willamette River
Metals	Aluminum	WB	0.00011	0.0022	0.00096	0.0059	24	Fifteen Mile Ck
Metals	Arsenic	WB	0.011	0.21	0.094	0.58	21	Willamette River
Metals	Arsenic	WB	0.0057	0.11	0.048	0.30	24	Fifteen Mile Ck
Metals	Cadmium	WB	0.015	0.28	0.12	0.76	21	Willamette River
Metals	Cadmium	WB	0.0070	0.13	0.059	0.36	24	Fifteen Mile Ck
Metals	Chromium	WB	0.0035	0.067	0.030	0.18	21	Willamette River
Metals	Chromium	WB	0.0038	0.072	0.032	0.20	24	Fifteen Mile Ck
Metals	Cobalt	WB	0.00019	0.0036	0.0016	0.0098	21	Willamette River
Metals	Cobalt	WB	0.00013	0.0025	0.0011	0.0069	24	Fifteen Mile Ck
Metals	Copper	WB	0.012	0.24	0.10	0.64	21	Willamette River
Metals	Copper	WB	0.014	0.27	0.12	0.75	24	Fifteen Mile Ck
Metals	Manganese	WB	0.00035	0.0066	0.0029	0.018	21	Willamette River
Metals	Manganese	WB	0.00019	0.0037	0.0016	0.010	24	Fifteen Mile Ck
Metals	Mercury	WB	0.092	1.8	0.78	4.8	21	Willamette River
Metals	Mercury	WB	0.19	3.6	1.6	9.8	24	Fifteen Mile Ck
Metals	Nickel	WB	0.000095	0.0018	0.00080	0.0049	21	Willamette River
Metals	Nickel	WB	0.0015	0.029	0.013	0.079	24	Fifteen Mile Ck
Metals	Selenium	WB	0.013	0.24	0.11	0.67	21	Willamette River
Metals	Selenium	WB	0.012	0.22	0.099	0.61	24	Fifteen Mile Ck
Metals	Vanadium	WB	0.00060	0.011	0.0050	0.031	21	Willamette River
Metals	Vanadium	WB	0.00066	0.013	0.0056	0.034	24	Fifteen Mile Ck
Metals	Zinc	WB	0.0077	0.15	0.065	0.40	21	Willamette River
Metals	Zinc	WB	0.0079	0.15	0.066	0.41	24	Fifteen Mile Ck

NOTE:

FS - fillet with skin AFC - average fish consumption
 WB - whole body HFC - high fish consumption

Risk for General Public:

AFC - risk based on mean U.S. per capita consumption rate of uncooked freshwater and estuarine fish, 7.5 g/day (12 meals/yr) (USEPA 2000a)

HFC - risk based on 99th percentile U.S. per capita consumption rate of uncooked freshwater and estuarine fish, 142.4 g/day (19 meals/mo) (USEPA 2000a)

Risk for Native American:

AFC - risk based on mean consumption rate for fish consumers in the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin,
 63.2 g/day (2 meals/wk) (CRITFC 1994)

HFC - risk based on 99th percentile consumption rate for fish consumers in the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin,
 389 g/day (12 meals/wk) (CRITFC 1994)

Chlordane (total) - sum of cis-chlordane, cis-nonachlor, gamma-chlordane, oxychlordane, and trans-nonachlor

Total Aroclors - based on Aroclor 1254 in FS and sum of Aroclors 1254 and 1260 in WB; risk calculated using RfD for Aroclor 1254

Total DDT - sum of o,p' and p,p' isomers of DDT and its derivatives (DDD and DDE); risk calculated using RfD for DDT